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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/612,477	07/02/2003	Mark W. Cheng	NC34623 (9021.159)	3129
7590	05/03/2005		EXAMINER HARPER, KEVIN C	
Scheef & Stone, L.L.P. Suite 1400 5956 Sherry Lane Dallas, TX 75225			ART UNIT 2666	PAPER NUMBER

DATE MAILED: 05/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/612,477

Applicant(s)

CHENG ET AL.

Examiner

Kevin C. Harper

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 and 16 is/are allowed.
- 6) ☒ Claim(s) 17 is/are rejected.
- 7) ☒ Claim(s) 1-14 and 18 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>05/04</u> . | 6) <input type="checkbox"/> Other: _____  |

***Claim Objections***

1. Claims 1-14 are objected to because in claim 1, lines 18-19, the repetition of “responsive to receipt of the H-ARQ status response” should be removed.
2. Claims 12-14 are objected to because claim 12 does not end in a period.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johansson et al. (US 6,473,399) in view of Lee et al. (US 6,731,623).

3. Johansson discloses a method of a radio communication system having a sending station and a receiving station (figs 1 and 3), where data is formatted at an upper level logical layer into

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an upper level data frame (fig. 4, RLC) and is provided to a lower level logical sublayer for formatting into a lower level data frame (fig. 4, MAC or physical layer; fig. 5). The lower level logical layer uses ARQ feedback (col. 3, lines 34-37) and the receiving station has a retransmission timer (fig. 6, start EPM timer) for timing a period commencing when a missing upper-level frame is detected at the receiving station (fig. 6, timer starts when SACK is transmitted). The sending station selectably sends the upper frame at a first data rate and retransmits segmented portions of the upper level frame at a second reduced data rate (fig. 6, transmission rate reduced before PDUs 1 and 2 are sent). The method comprises detecting reception at the receiving station of retransmission of the upper level data frame at the second reduced rate (fig. 6, EPC =1 and EPC =2) and resetting the retransmission timer when the upper level frame is retransmitted in segmented portions (fig. 2, steps 24-28 and 36; col. 2, lines 43-44 and 50-61). However, Johansson does not disclose that the receiving station uses H-ARQ. Lee discloses using H-ARQ in place of ARQ in a radio communication system (col. 2, lines 55-57). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to use H-ARQ in the invention of Johansson in order to increase system throughput (Lee, col. 3, lines 39-40).

***Allowable Subject Matter***

4. Claims 1-14 would be allowable if the above claim objections are overcome.
5. Claims 15-16 are allowed.

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6. Claim 18 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Das et al. (US 2002/0152342) discloses retransmitting sub-packets at a selected data rate (fig. 1, step 140; claims 15 and 18). Cheng et al. (US 2002/0191544; para. 46) and Khan et al. (US 2003/0214935; para. 17) each discloses aborting a lower layer HARQ transfer and then sending an RLP NAK.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 571-272-3166. The examiner can normally be reached weekdays from 11:30 AM to 7:00 PM ET.

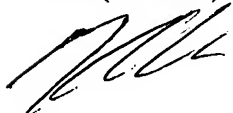
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao, can be reached at 571-272-3174. The centralized fax number for the Patent Office is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications associated with a customer number is available through Private PAIR only. For more information about the PAIR system, see [portal.uspto.gov](http://portal.uspto.gov). Should you have questions on

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access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-

9197 (toll-free).



Kevin C. Harper

May 1, 2005

*Seema S. Rao*  
SEEMA S. RAO 5/2/05  
SUPERVISORY PATENT EXAMINER  
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